Claims:

1. A coated workpiece comprising a substrate, an intermediate metallic layer coated on said substrate, and a layer coated on said intermediate layer, which includes an aluminum/magnesium alloy.

2. The coated workpiece according to claim 1, characterized in that the surface of the substrate is electrically conductive.

3. The coated workpiece according to claim 1 or 2, characterized in that the substrate contains a metal and/or a metal alloy and/or is a metallized substrate.

4. The coated workpiece according to one or more of the preceding claims, characterized in that the substrate contains constituents selected from the group of iron, steel, iron alloy, nonferrous metals, pressure-cast zinc, pressure-cast aluminum, titanium, titanium in the form of an alloy, magnesium, pressure-cast magnesium, or mixtures thereof, the above-mentioned metals preferably being present as alloy components in the substrate.

5. The coated workpiece according to one or more of the preceding claims, characterized in that the intermediate layer contains iron, iron and nickel, tin and nickel, nickel, cobalt, copper, chromium, molybdenum, vanadium or alloys of the above-mentioned metals.

6. The coated workpiece according to one or more of the preceding claims, characterized in that the intermediate layer has a layer thickness of from 0.1 μm to 30 μm.

7. The coated workpiece according to one or more of the preceding claims, characterized in that the layer coated on the intermediate layer, which contains an aluminum/magnesium alloy, preferably contains from 0.5 to 70 wt.-% magnesium.

8. The coated workpiece according to one or more of the preceding claims, characterized in that the layer coated on the intermediate layer, which contains an aluminum/magnesium alloy, has a layer thickness of from 0.1 μm to 100 μm.

9. The coated workpiece according to one or more of the preceding claims, characterized in that the coated workpieces are rack goods, bulk materials, or continuous products, the coated workpiece preferably being a wire, a metal sheet, a screw, a nut, a concrete anchorage, or a machine component part.

10. A method for the production of a coated workpiece, comprising the steps of:

a) coating an intermediate metallic layer on a substrate, and

b) coating a layer containing an aluminum/magnesium alloy on said intermediate metallic layer.

11. The method for the production of a coated workpiece according to claim 10, characterized in that the intermediate metallic layer is deposited from an aqueous solution or from a non-aqueous solution in step a).

12. The method for the production of a coated workpiece according to claim 10 or 11, characterized in that the intermediate metallic layer is electrodeposited from an aqueous electrolyte in step a).

13. The method for the production of a coated workpiece according to claim 10, characterized in that the layer including an aluminum/magnesium alloy is deposited from an anhydrous electrolyte in step b).

14. The method for the production of a coated workpiece according to claim 13, characterized in that the layer including an aluminum/magnesium alloy is electrodeposited from said anhydrous electrolyte in step b).

15. The method for the production of a coated workpiece according to one or more of claims 10 to 14, characterized in that an electrically conductive layer is coated on the substrate prior to coating the intermediate metallic layer in step a).

16. The method for the production of a coated workpiece according to claim 15, characterized in that the electrically conductive layer is coated on the substrate by means of metallization.

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